

WHAT IS CLAIMED IS:

1. A three-dimensional graphics drawing apparatus drawing an object based on color data and coordinate data, comprising:

a transmittance setting unit setting transmittance of the object based on a depth coordinate value included in said coordinate data; and

5 a drawing unit drawing the object based on the color data including the transmittance set by said transmittance setting unit and said coordinate data.

2. The three-dimensional graphics drawing apparatus according to claim 1, wherein said transmittance setting unit sets the depth coordinate value of the object as the transmittance of the relevant object.

3. The three-dimensional graphics drawing apparatus according to claim 1, wherein said transmittance setting unit uses a monotone increasing function of the depth coordinate value of the object to calculate the transmittance of the relevant object.

4. The three-dimensional graphics drawing apparatus according to claim 3, wherein said monotone increasing function is a linear function of the depth coordinate value of the object with a positive coefficient.

5. The three-dimensional graphics drawing apparatus according to claim 1, wherein said transmittance setting unit uses a reciprocal of the depth coordinate value of the object to calculate the transmittance of the relevant object.

6. The three-dimensional graphics drawing apparatus according to claim 1, wherein

said transmittance setting unit sets the depth coordinate value of the object as the transmittance of the relevant object when the depth coordinate value of the object is not greater than a threshold value, and sets

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a prescribed value as the transmittance of the object when the depth coordinate value of the relevant object exceeds the threshold value.

7. The three-dimensional graphics drawing apparatus according to claim 1, wherein

5 said transmittance setting unit calculates the transmittance of the object using a monotone increasing function of the depth coordinate value of the relevant object when the depth coordinate value of the relevant object is not greater than a threshold value, and sets a prescribed value as the transmittance of the object when the depth coordinate value of the relevant object exceeds the threshold value.

8. The three-dimensional graphics drawing apparatus according to claim 7, wherein said monotone increasing function is a linear function of the depth coordinate value of the object with a positive coefficient.

9. The three-dimensional graphics drawing apparatus according to claim 1, wherein

5 said transmittance setting unit calculates the transmittance of the object using a reciprocal of the depth coordinate value of the relevant object when the depth coordinate value of the relevant object is at least a threshold value, and sets a prescribed value as the transmittance of the object when the depth coordinate value of the relevant object is less than the threshold value.

10. A three-dimensional graphics drawing apparatus drawing an object based on color data and coordinate data including a depth coordinate value, comprising:

a color register storing the color data of the object;

5 a color data setting unit setting the color data of the object in said color register when the depth coordinate value of the relevant object is not greater than a threshold value, and setting a prescribed value in said color register when the depth coordinate value of the relevant object exceeds the

threshold value; and

- 10        a drawing unit drawing the object based on the color data stored in said color register and said coordinate data.

11. A three-dimensional graphics drawing method for drawing an object based on color data and coordinate data, comprising the steps of:

setting transmittance of the object based on a depth coordinate value included in said coordinate data; and

- 5        drawing the object based on the color data including said transmittance set in the setting step and said coordinate data.

12. The three-dimensional graphics drawing method according to claim 11, wherein said step of setting the transmittance of the object includes the step of setting the depth coordinate value of the relevant object as the transmittance of the object.

13. The three-dimensional graphics drawing method according to claim 11, wherein said step of setting the transmittance of the object includes the step of calculating the transmittance of the object using a monotone increasing function of the depth coordinate value of the relevant object.

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14. The three-dimensional graphics drawing method according to claim 13, wherein said monotone increasing function is a linear function of the depth coordinate value of the object with a positive coefficient.

15. The three-dimensional graphics drawing method according to claim 11, wherein said step of setting the transmittance of the object includes the step of calculating the transmittance of the object using a reciprocal of the depth coordinate value of the relevant object.

16. The three-dimensional graphics drawing method according to claim 11, wherein

5 said step of setting the transmittance of the object includes the step of setting the depth coordinate value of the relevant object as the transmittance of the object when the depth coordinate value of the relevant object is not greater than a threshold value, and setting a prescribed value as the transmittance of the object when the depth coordinate value of the relevant object exceeds the threshold value.

17. The three-dimensional graphics drawing method according to claim 11, wherein

5 said step of setting the transmittance of the object includes the step of calculating the transmittance of the object using a monotone increasing function of the depth coordinate value of the relevant object when the depth coordinate value of the relevant object is not greater than a threshold value, and setting a prescribed value as the transmittance of the object when the depth coordinate value of the relevant object exceeds the threshold value.

18. The three-dimensional graphics drawing method according to claim 17, wherein said monotone increasing function is a linear function of the depth coordinate value of the object with a positive coefficient.

19. The three-dimensional graphics drawing method according to claim 11, wherein

5 said step of setting the transmittance of the object includes the step of calculating the transmittance of the object using a reciprocal of the depth coordinate value of the relevant object when the depth coordinate value of the relevant object is at least a threshold value, and setting a prescribed value as the transmittance of the object when the depth coordinate value of the relevant object is less than the threshold value.